

NOTES ON SPATHIMEIGENIA WITH DESCRIPTIONS OF
FOUR NEW SPECIES¹
(DIPTERA, TACHINIDAE)

H. J. REINHARD, *College Station, Texas*

Determinations of material belonging to *Spathimeigenia* have proved difficult, notwithstanding a revision of the genus with keys to the known species, published by Aldrich in 1931 (Proc. U. S. Natl. Mus., 80: 1-10). The latter reports on approximately 85 specimens distributed among 11 nominal species. The additional material accumulated during the past 25 years is still too meager to provide an adequate basis for the construction of amended keys to the currently known forms assignable to the genus.

The apparently new species described below and additional material now available in previously known forms indicate that some of the items relating to color patterns, chaetotaxy and especially the scutellar bristling, among other characters, are much too unstable for diagnostic purposes. Until specific limits of the variable forms can be established, or at least are better known, an element of doubt attends much of the routine determination work on members of this economically important genus. Its host relationships are with sawflies and long series of reared specimens from all sections of the United States and Mexico will prove especially helpful in resolving perplexing questions of specific entity.

Spathimeigenia spinigera Townsend

Townsend, 1915, Proc. Biol. Soc. Wash., 18: 19; 1940, Manual of Myiology, Pt. 10, 153.

Aldrich, 1931, Proc. U. S. Natl. Mus., 80: 4-5.

The references to this species and synonymy have been listed by Aldrich.

Hitherto only one specimen has been reported from Texas. Four additional local examples are in my collection; three reared from *Neodiprion lecontei* (Fitch) at Henderson and one female taken by me at College Station, May 15, 1943. Besides this material there are two additional females, one an ancient specimen with a fine handwritten label "Par. on pine sawfly, Iss. March 79" and one reared from "*Neodiprion swainci* Middleton, Dolbea Co. Pa."

Spathimeigenia mexicana Aldrich

Aldrich, 1931, Proc. U. S. Natl. Mus., 80: 5-6.

The type series, including 19 males and 12 females all reared from *Neodiprion vallicola* Rohwer in Mexico, is described in part as follows:

¹ Contribution No. 2763, from Department of Entomology, Texas Agricultural Experiment Station.

"pollen deep golden on parafrontals, parafacials, and posterior orbits; face with yellow pollen . . . Tip of fourth (abdominal) joint red, sometimes a little red on sides of second, rarely on third". Since this color pattern is based upon a good series of reared specimens, it should prove fairly typical for the species.

In the material available, one male from the Chiricahua Mts., Arizona, agrees well with the original characterization and apparently belongs here. However, two other examples provisionally referred to the present species show some seemingly important distinctions.

One male from Tamaulipas, Mexico, has the abdomen much more extensively red at the sides, the head pollen is essentially pale gray and the parafacials bear a few inconspicuous pale hairs below middle; there are additional minor differences.

Another male example from the type locality Michoacan, Mexico, differs from the typical form in the following characters among others: head pollen yellow (not golden) grayish near vertex and on upper part of posterior orbits; apex of abdomen black; third antennal segment three times longer than second; bristling of thorax and abdomen considerably stronger than in *mexicana*; four post dorsocentrals; facialia setose on lower three-fifths; genitalia about as in *scitigera*. Evaluation of these items must await the accumulation of more material.

***Spathimeigenia dolopsis*, n. sp.**

In this form the male abdomen is as wide as the thorax and not much longer than same, effecting a somewhat more compact build than in any of the known allied forms.

Male.—Head pollen gray with a perceptible yellow tinge below mid front and on parafacial; latter about one-third clypeal width, with fine black hairs extending sparsely above middle; vertex 0.20 of head width; antenna black, third segment squared on apex with a sharp but not produced anterior angle, two and one-half times length of second; cheek one-fifth eye length; palpus yellow gently bowed and thickened beyond middle.

Thorax and scutellum black, dusted with gray pollen and marked with four rather broad, moderately well defined metanotal vittae; chaetotaxy as in *dolosa*, except four post dorsocentrals, hind lateral on scutellum shorter, the apical pair distinctly larger and about three pairs of discals differentiated behind middle. Legs black, mid tibia with two anterolateral bristles, claws and pulvilli equal length of last tarsal segment. Wing slightly infusate on costal half; veins brown, third with two or three hairs near base; costal spine small; calypters white tinged with yellow.

Abdomen wholly black, last three segments with changeable gray pollen which in direct view leaves a broad subshiny posterior margin on intermediate segments; chaetotaxy as in *dolosa*. Female unknown.

Length, 9.5 mm.

Holotype: Griffin Creek, Jackson Co., Oregon, July 5, 1951 (C. Fitch).

***Spathimeigenia aurifrons* Curran**

Curran, 1930, Can. Ent., 62: 246-47.

This species appears rather closely allied to the genotype, *spinigra*. In a series of thirty-two specimens of both sexes collected at Farmingdale, L. I., New York, June 16, 1936, by Blanton and Borders, the apex of the abdomen and the legs are regularly black, parafrontals sometimes cinereous but more frequently yellowish and rarely golden as originally described. In one additional pair reared from *Ncodiprion swainci* Middleton the male, from Laniel, P. Q., VII-8-31 (M. B. Dunn), has the apex of the abdomen black but the female (LaToque, P. Q.) shows a reddish color along the hind margin on venter of the fourth tergite. One pair from Riverside, California, "ex. sawfly (?) cypress", May 15, 1926 (H. L. McKenzie) agrees with the common pattern in having fourth abdominal segment wholly black but the golden front in both sexes averages considerably wider and this form may not belong here.

***Spathimeigenia dolosa*, n. sp.**

Traces to *S. hylotomae* in available keys but averages much larger in build and the last three abdominal segments have obviously wider basal pollen bands.

Male.—Front at vertex 0.28 of head width, equibroad to middle thence gradually widening downward; frontalia deep brown, subequal to parafrontal width; head pollen silvery often with a yellowish tinge especially on parafrontal; uppermost two frontals stout and reclinate, two or three bristles beneath antennal base; outer verticals barely differentiated, orbitals absent; proclinate ocellars well developed; parafacial over one-half clypeal width, with sparse fine black hairs on lower half; vibrissae on oral margin, with three or four bristles next above on facialia; antenna black, third segment about one-half parafacial width and barely twice longer than second; arista micro pubescent, blackish with a paler median ring, very slender beyond narrowly thickened base, proximal segments short; eye bare, strongly oblique; proboscis short, palpus longer than haustellum, yellow and beset with short black spinose hairs; cheek barely one-third eye length; occiput flat, with two rows of black hairs on upper margin and entirely pale pilose below.

Thorax gray pollinose on black ground color dorsal vittae well defined, scutellum concolorous with mesonotum. Chaetotaxy: acrostichal 3, 3; dorsocentral 3, 3; intraalar 3; supraalar 3; presutural 2; notopleural 2; humeral 3.5; pteropleural 1-2 (small); sternopleural 2, 1; scutellum with 3 lateral (hindmost pair divergent, reaching about to apex of second abdominal segment), 1 decussate hairlike apical and 1 good-sized discal pair; prosternum setose at sides; propleuron and postnotal slope bare. Legs black; mid tibia with one strong anterolateral bristle; claws and pulvilli about equal to length of last tarsal segment. Wing grayish hyaline usually with a faint yellowish tinge apparent along the principal veins; first posterior cell narrowly open well before wing tip; third vein with 1 to 3 setulae near base; hind cross vein oblique, joining fourth a little nearer cubitus than small cross vein; costal spine well developed; epaulet and subepaulet blackish; calypters whitish to pale yellow.

Abdomen narrower and longer than thorax, apical two-fifths or more of last three segments shining black above and last two largely tomentose on venter; one

pair of median marginal bristles on first two segments and a marginal row on last two; intermediate segments each with one pair of good-sized discs and anal with two discal rows on apical half; hypopygium blackish, small and retracted; forceps short, divided beyond middle terminating in blunt-tipped non-divergent prongs; accessory process thin or bladelike in rear view and plowshare-shaped in profile or narrowed outwardly from base to widest part beyond middle thence well tapered to apex and obliquely concave on outer face; fifth sternite with a deep U-shaped apical excision, black lobes largely retracted, bearing pale pubescence intermixed with a few delicate pale hairs along inner margin.

Female.—Front at vertex 0.31 of head width and but slightly wider at antennal base; head pollen entirely gray; frontalia narrower than one parafrontal; outer verticals and proclinate orbitals present; abdomen with a ventral carina bearing about ten stubby spines on margin of third segment; genitalia terminating in a short curved sharp-tipped piercer.

Length, 8-10.5 mm.

Holotype male and allotype female, College Station, Texas, June 19 and April 24, 1946 (H. J. Reinhard). Paratypes: 3 males and 3 females, same data as type except dated from May 3 to July 10, 1945; and 1 male, Austin, Texas, April 18, 1949 (F. A. Cowan).

Spathimeigenia hylotomae (Coquillett)

Coquillett, 1898, Can. Ent. 30: 233 (*Admontia*).

This is one of the more readily recognizable members of the genus. In the sixteen specimens collected locally (April to July) the color pattern appears more stable than in some allied forms. Among the more distinctive items associated with this species are the following: head pollen subsilvery, parafacial broader than usual, with an isolated hair-patch on lower part; abdomen shining black to apex with silvery pollen on basal half or less of last three segments above, each bearing a smallish but well differentiated pair of discs. The host relationships of the species in the southwestern limits of its range are not known.

Spathimeigenia erecta Aldrich

Aldrich, 1931, Proc. U. S. Natl. Mus., 80: 8.

One male from Michigan, ex. *Ncodiprion punctum* (Norton), and one pair from Canada, ex. *N. lecontei* (Fitch), are provisionally assigned here. In these specimens the color pattern of the abdomen closely approaches that of *spinigera*; however, the legs are entirely black and the discs on the intermediate abdominal segments are doubled with numerous coarse erect hairs intermixed along the median line. In the female, hitherto unknown, the apical scutellars are completely lacking, apex of abdomen is distinctly red and the proximal antennal segments are red in ground color.

Spathimeigenia bridwelli Aldrich

Aldrich, 1931, Proc. U. S. Natl. Mus., 80: 9.

This species, described from a single male specimen from Baldwin, Kansas, presents a number of peculiar characteristics that readily

distinguish it from all allied forms except perhaps *fvoris*. From the latter, the present species differs in having much denser subsilvery head pollen which completely obscures the ground color; the male claws and pulvilli are minute; discals on intermediate abdominal segments smallish and reduced to a single pair, not at all differentiated on the third segment in the one female example. Besides the latter, two males, also from Kansas, are referred here.

Spathimeigenia fvoris, n. sp.

Front wide as in *bridwelli*, but with thin plumbeous pollen on a black background which remains very apparent on entire parafacial and cheek except the reddish groove of latter.

Male.—Vertex 0.33 of head width; verticals two pairs, ocellars long; frontals in a single row, two or three bristles below antennal base; frontalia velvety black, wider than parafrontal; antenna black, second segment slightly over one-half as long as third which reaches to lower fourth of face; black, micro pubescent arista thickened on basal fourth, proximal segments short; facialia bearing three to five bristly hairs on lower fourth, vibrissae on oral margin; parafacialia over three-fourths clypeal width, with a rather large patch of fine black hairs on lower three-fifths, cheek with a similar vestiture on lower margin, about one-half eye length; proboscis short, labella fleshy, palpus rather slender, brown to blackish but sometimes paler; occiput flat, plumbeous, beset with short pale hairs.

Thorax and scutellum subshining black, lightly dusted with gray pollen; dorsal vittae poorly defined; chaetotaxy as in *dolosa*, but the hindmost lateral on scutellum shorter and the hairlike apicals usually irregular and sometimes entirely absent. Legs subshiny black; mid tibia with two stoutish anterolateral bristles and fore tibia with two posterolaterals; claws and pulvilli almost equal to length of last tarsal segment. Wing with a uniform light brownish or smoky tinge; third vein usually with two setulae near base; first posterior cell open before extreme wing tip; costal spine subequal to length of small cross vein; calypters opaque white; epaulet and halteres infuscated.

Abdomen shining black with silvery pollen on basal fourth of last three segments; discal pairs on intermediate segments usually doubled and about three irregular rows on anal; one pair of median marginals on segments one and two and a marginal row on three and four; venter entirely shining. Female unknown.

Length, 6-7.5 mm.

Holotype: Berkeley, Calif., April 14, 1954 (P. D. Hurd) in the California Academy of Sciences Collection. Paratypes 5 males all from California as follows: one, same data as type except dated April 7, 1954; one "Palmdale, III-12-1934"; one, "Los Angeles Co., V-7-39"; one, Glenville, Kern Co., IV-24-49 (E. G. Linsley, J. W. MacSwain, R. E. Smith); and one, labeled "Cal. Coql.", without precise locality.

Spathimeigenia texensis Aldrich

Aldrich, 1931, Proc. U. S. Natl. Mus., 80: 9-10.

The very short claws and pulvilli in the male seem distinctive, at least in this sex. Of the five specimens before me three are from Mexico, one from Arizona and one male is from Huntsville, Texas,

May 10, 1951 (F. A. Cowan). The latter specimen is of particular interest since the parafacials are entirely devoid of any hairs or setae but the agreement in other pertinent items, including genitalia, seems too close for any other generic assignment. However, since the front is a little wider and outer verticals are larger, the specimen may not be conspecific with *terensis*. More material is needed to determine the limits of variation in the present form.

***Spathimeigenia erroneis*, n. sp.**

A small species differing from all known allied forms in the total absence of abdominal discals.

Male.—Head pollen silvery on a dark background; front at vertex 0.28 of head width, slightly wider at antennal base; frontalia equibroad to triangle, narrower than parafrontal; outer verticals barely differentiated; antenna black, third segment not quite three times longer than second; black arista micro pubescent, tapering outward on moderately thickened proximal fourth, thence very slender or delicate to tip; parafacial inconspicuously setose on lower half, which is hardly equal to width of third antennal segment; facialia setose on lower fourth; cheek one-sixth eye length; palpus reddish; occiput wholly pale-haired behind occipital fringe above.

Thorax and scutellum black, dusted with thin cinereous pollen, which in a flat rear view shows two broad mesonotal vittae uninterrupted at suture; chaetotaxy as in *dolosa* but bristles generally weaker. Legs black, mid tibia with one antero-lateral bristle; claws and pulvilli minute. Wing clear or hyaline; veins yellow, third with two hairs near base; first posterior cell closed at costa a little before wing tip; calypters translucent white.

Abdomen shining black with silvery pollen on about basal third of last three segments, hairs on upper surface of each appressed; one pair of median marginals on segments one and two and a marginal row on three and four; hypopygium small, retracted in repose. Female unknown.

Length, 5 mm.

Holotype: College Station, Texas, June 3, 1920 (H. J. Reinhard).

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